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| APPLICATION NO.   | FILING DATE | FIRST NAMED INVENTOR | ATTORNEY DOCKET NO.           | CONFIRMATION NO. |
|---|-------------|----------------------|-------------------------------|------------------|
| 10/707,109  | 11/21/2003  | Noriyoshi Munenaga   | 12619-US-452                  | 1108             |
| 31561 7590 12/29/2006<br>JIANQ CHYUN INTELLECTUAL PROPERTY OFFICE<br>7 FLOOR-1, NO. 100<br>ROOSEVELT ROAD, SECTION 2<br>TAIPEI, 100<br>TAIWAN |             |                      | EXAMINER<br>MERCADO, JULIAN A |                  |
|   |             |                      | ART UNIT<br>1745              | PAPER NUMBER     |
| SHORTENED STATUTORY PERIOD OF RESPONSE  |             |                      | MAIL DATE                     | DELIVERY MODE    |
| 3 MONTHS  |             |                      | 12/29/2006                    | PAPER            |

**Please find below and/or attached an Office communication concerning this application or proceeding.**

If NO period for reply is specified above, the maximum statutory period will apply and will expire 6 MONTHS from the mailing date of this communication.

|                              |                        |  |                     |  |
|------------------------------|------------------------|--|---------------------|--|
| <b>Office Action Summary</b> | <b>Application No.</b> |  | <b>Applicant(s)</b> |  |
|                              | 10/707,109             |  | MUNENAGA ET AL.     |  |
|                              | <b>Examiner</b>        |  | <b>Art Unit</b>     |  |
|                              | Julian Mercado         |  | 1745                |  |

**-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --**

**Period for Reply**

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

**Status**

- 1) ☒ Responsive to communication(s) filed on 03 October 2006.
- 2a) ☒ This action is **FINAL**.                      2b) ☐ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

**Disposition of Claims**

- 4) ☒ Claim(s) 12-31 is/are pending in the application.
- 4a) Of the above claim(s) \_\_\_\_\_ is/are withdrawn from consideration.
- 5) ☐ Claim(s) \_\_\_\_\_ is/are allowed.
- 6) ☒ Claim(s) 12-31 is/are rejected.
- 7) ☐ Claim(s) \_\_\_\_\_ is/are objected to.
- 8) ☐ Claim(s) \_\_\_\_\_ are subject to restriction and/or election requirement.

**Application Papers**

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on \_\_\_\_\_ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.  
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).  
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

**Priority under 35 U.S.C. § 119**

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All    b) ☐ Some \* c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

\* See the attached detailed Office action for a list of the certified copies not received.

**Attachment(s)**

- |   |   |
|---|---|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892)   | 4) <input type="checkbox"/> Interview Summary (PTO-413)<br>Paper No(s)/Mail Date. _____ |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948)  | 5) <input type="checkbox"/> Notice of Informal Patent Application                       |
| 3) <input checked="" type="checkbox"/> Information Disclosure Statement(s) (PTO/SB/08)<br>Paper No(s)/Mail Date <u>10-20-06</u> . | 6) <input type="checkbox"/> Other: _____  |

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## **DETAILED ACTION**

### ***Remarks***

This Office action is responsive to applicant's amendment filed on October 3, 2006.

Claims 12-31 are pending.

### ***Information Disclosure Statement***

The Information Disclosure Statement filed on October 20, 2006 has been initialed by the examiner, however, it is noted that the form itself does not have any documents cited therein, nor is the certification statement signed by applicant or applicant's representative.

### ***Claim Rejections - 35 USC § 112***

The following is a quotation of the second paragraph of 35 U.S.C. 112:

The specification shall conclude with one or more claims particularly pointing out and distinctly claiming the subject matter which the applicant regards as his invention.

Claim 15, 16, 18, 20, 23, 24, 26 and 28 are rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention.

Claim 15 recites the limitation "the position where said lead is fixed" in line 2. There is insufficient antecedent basis for this limitation in the claim.

Claims 16 at line 2 and claim 23 at line 1 each recites a similar limitation to claim 15 and is therefore rejected under the same grounds.

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Claim 15 recites the limitation "the position where said lead is connected" in lines 2-3. There is insufficient antecedent basis for this limitation in the claim.

Claim 23 at lines 1-2 and claim 24 at line 2 each recites a similar limitation to claim 15 and is therefore rejected under the same grounds.

Claim 15 recites the limitation "the extending direction of said lead" in lines 3-4. There is insufficient antecedent basis for this limitation in the claim.

Claim 16 recites the limitation "the outer side" in lines 2-3. There is insufficient antecedent basis for this limitation in the claim.

Claim 24 at lines 2-3 recites a similar limitation to claim 16 and is therefore rejected under the same grounds.

Claim 16 recites the limitation "said core end" in line 3. There is insufficient antecedent basis for this limitation in the claim.

Claim 18 recites the limitation "the outer surface" in line 2. There is insufficient antecedent basis for this limitation in the claim.

Claim 26 at line 2 recites a similar limitation to claim 18 and is therefore rejected under the same grounds.

Claims 20 and 28 rejected under 35 U.S.C. 112, second paragraph, as being incomplete for omitting essential structural cooperative relationships of elements, such omission amounting to a gap between the necessary structural connections. See MPEP § 2172.01. The omitted structural cooperative relationships are: a positive recitation of the lead protruding outside the cell. This structural feature is required for claims 20 and 28, which recites that a resin on the

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lead adheres to a laminate film of the cell casing, and since the laminate film is understood as implicitly being on an *outermost* portion of the casing.

***Claim Rejections - 35 USC § 102***

The rejection of claims 1 and 3-10 under 35 U.S.C. 102(e) based on Ishida et al. (U.S. 2003/0134190 A1) has been withdrawn.

The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

(e) the invention was described in (1) an application for patent, published under section 122(b), by another filed in the United States before the invention by the applicant for patent or (2) a patent granted on an application for patent by another filed in the United States before the invention by the applicant for patent, except that an international application filed under the treaty defined in section 351(a) shall have the effects for purposes of this subsection of an application filed in the United States only if the international application designated the United States and was published under Article 21(2) of such treaty in the English language.

Claim 29 is rejected under 35 U.S.C. 102(e) as being anticipated by Ishida et al. (U.S. 2003/0134190 A1).

The rejection is maintained for the reasons of record, insofar as claim 29, while submitted as a new claim, is of the same exact scope as prior claim 11 (now canceled). Applicant's arguments have been fully considered, however they are not found persuasive.

Applicant submits (on page 13 of the remarks) the sole argument that Ishida et al. fails to teach or suggest the claimed core insofar as being "too thin to have enough rigidity and can't have the function of [a] core." (remarks on page 8) This argument is not persuasive. Applicant is reminded that attorney arguments are not evidence and cannot take place of evidence in the

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record; an assertion based on speculation is just attorney argument and not the kind of factual evidence that is required to rebut a prima facie case of obviousness. MPEP 2145.

Notwithstanding, this argument also appears to be premised on an intended use feature of the claimed core, i.e. as a structural member for providing rigidity; it is asserted that arguments drawn to an intended use is not germane towards a claimed method for making. Furthermore, the claim is entirely silent on any features drawn to the rigidity of the claimed core, nor does the claim recite any structural features drawn to its thickness or any other dimension. Lastly, to what extent the prior art core may be “too thin” cannot be ascertained, as the term “thin” is a relative term and one which is also absent of any lexicography in the specification.

Claims 12-18, 21-26, 30 and 31 rejected under 35 U.S.C. 102(b) as being anticipated by Ikeda et al. (U.S. Pat. 4,604,333).

For independent claims 12 and 21, Ikeda et al. teaches a cell comprising a wound type power generating element formed by winding a positive electrode [6], a negative electrode [1], and a separator [4], an insulative core [5] around which said positive electrode, said negative electrode, and said separator are wound, and a lead [3] or connector rod for taking current from said wound type power generating element fixed on said core and connected to the negative electrode. See col. 3 line 11-19 and col. 2 line 62 et seq.

For claims 13, 22, 30 and 31, as the electrode plates are specifically disclosed as being wound around the core, the core is asserted as being rigid as it functions as a “winding core, thereby providing a spiral electrode body.” See col. 3 lines 6-10.

For claim 14, as set forth above the core is specifically disclosed as insulating. (ib.)

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For claims 15 and 23, and to the extent that the claim is understood by the examiner for the reasons set forth under 35 U.S.C. 112, second paragraph (discussion above), the lead is fixed to the core via the central aperture shown in Figure 7, while being fixed to the electrode through groove [12]. Thus, the points are at different positions.

For claims 16 and 24, and to the extent that the claim is understood by the examiner for the reasons set forth under 35 U.S.C. 112, second paragraph (discussion above), as the groove is disposed at the outer portion or side of the core, the lead would resultantly be connected to the electrode along the outer side of the core.

For claims 17 and 25, the lead protrudes outside the cell through the central aperture shown in Figure 7 and as shown in Figure 5.

For claims 18 and 26, and to the extent that the claim is understood by the examiner for the reasons set forth under 35 U.S.C. 112, second paragraph (discussion above), the lead is connected to a terminal [10] having conductivity to the outer surface of the cell. See col. 3 lines 12-17.

Claims 12, 13 and 15-18 are rejected under 35 U.S.C. 102(e) as being anticipated by Romero (U.S. Pat. 6,730,431 B2).

For independent claim 12, Romero et al. teaches a cell comprising a wound type power generating element formed by winding a positive electrode [42], a negative electrode [40], and a separator [44], a core [11] (made of 304 SS steel) around which said positive electrode, said negative electrode, and said separator are wound, and a lead [30] or connector rod for taking



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current from said wound type power generating element fixed on said core and connected to the positive electrode. See col. 2 line 60 et seq. and col. 3 lines 40-48.

For claim 13, as the electrode plates are specifically disclosed as being wound around the core, the core is asserted as being rigid. While the examiner notes that the core is disclosed to collapse at extreme internal pressures, nonetheless the core is rigid in the absence of an overvoltage condition. See col. 3 line 62 et seq.

For claim 15, and to the extent that the claim is understood by the examiner for the reasons set forth under 35 U.S.C. 112, second paragraph (discussion above), the lead is fixed to the core at [34] as shown in Figure 5, while being fixed to the electrode through end plate [14]. Thus, the points are at different positions.

For claim 16, and to the extent that the claim is understood by the examiner for the reasons set forth under 35 U.S.C. 112, second paragraph (discussion above), the point where the lead is connected to the electrode is disposed at the outer side of the core end, insofar as this point is at a distal point from the core circumference. See Figure 5.

For claim 17, the lead protrudes outside the cell, as shown in Figure 5.

For claim 18, and to the extent that the claim is understood by the examiner for the reasons set forth under 35 U.S.C. 112, second paragraph (discussion above), the lead is connected to a terminal [22] having conductivity to the outer surface of the cell. See col. 3 lines 40-48.



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***Claim Rejections - 35 USC § 103***

The rejection of claim 2 under 35 U.S.C. 103(a) based on Ishida et al. and Gauthier et al. (U.S. Pat. 5,415,954) has been withdrawn.

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

Claims 19, 20, 27 and 28 are rejected under 35 U.S.C. 103(a) as being unpatentable over Ikeda et al. (U.S. Pat. 4,604,333) in view of Tamaki et al. (U.S. Pat. 5,418,083).

The teachings of Ikeda et al. are discussed above.

For claims 20 and 28, this rejection is applied notwithstanding the 35 U.S.C. 112, second paragraph rejection (discussed above), insofar as claims 20 and 28 appear to be incomplete for omitting essential structural cooperative relationships of elements, such omission amounting to a gap between the necessary structural connections.

Tamaki et al. does not explicitly teach a laminate film sheet for the case. However, Tamaki et al. teaches a laminate such as a sealing plate of insulating sheet material. See col. 3 line 42 et seq. This sheet is then adhered to a thermoplastic resin such as heat-shrink tubing [2] over the casing of a battery cell. See col. 3 line 17 et seq. Alternatively, adhesives such as epoxies and urethanes are further deemed readable on the claimed thermoplastic resin. The skilled artisan would find obvious to employ a laminate film adhered to a thermoplastic resin, for reasons such as effecting a moisture-tight seal. See col. 4 lines 37-41.

***Conclusion***

Applicant's arguments with respect to device claims 12-28, 30 and 31 have been considered but are moot in view of the new ground(s) of rejection.

Applicant's amendment necessitated the new ground(s) of rejection presented in this Office action. Accordingly, **THIS ACTION IS MADE FINAL**. See MPEP § 706.07(a). Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire THREE MONTHS from the mailing date of this action. In the event a first reply is filed within TWO MONTHS of the mailing date of this final action and the advisory action is not mailed until after the end of the THREE-MONTH shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than SIX MONTHS from the date of this final action.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Julian Mercado whose telephone number is (571) 272-1289. The examiner can normally be reached on Monday through Friday.

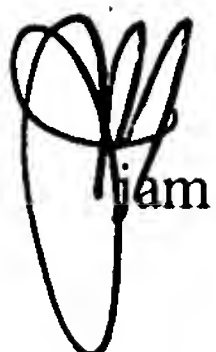
If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Patrick J. Ryan, can be reached on (571) 272-1292. The fax phone number for the organization where this application or proceeding is assigned is 703-872-9306.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications

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may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

Any inquiry of a general nature or relating to the status of this application or proceeding should be directed to the receptionist whose telephone number is (703) 308-0661.

A handwritten signature in black ink, appearing to be "jam" with a stylized flourish above it.A handwritten signature in black ink, appearing to be "Dahwei Yuan" with a long horizontal flourish extending to the right.

DAHWEIYUAN  
PRIMARY EXAMINER